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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,161	03/28/2007	Benjamin B. Yellen	46528-5090-00-US	8334
23973 7590 05/17/2010 DRINKER BIDDLE & REATH ATTN: INTELLECTUAL PROPERTY GROUP ONE LOGAN SQUARE, SUITE 2000 PHILADELPHIA, PA 19103-6996				
EXAMINER ROSASCO, STEPHEN D				
ART UNIT 1795		PAPER NUMBER		
NOTIFICATION DATE 05/17/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DBRIPDocket@dbi.com  
penelope.mongelluzzo@dbi.com

### Office Action Summary

**Application No.**

10/585,161

**Applicant(s)**

YELLEN ET AL.

**Examiner**

Stephen Rosasco

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 30 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/S&C)  
Paper No(s)/Mail Date 11/20/06, 3/28/07.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **Detailed Action**

Allowability is indicated for claim 8.

The following is an examiner's statement of reasons for allowance for claim 8: the prior art of record to Chen et al. (20040150865) teaches a programmable mask comprising: a plurality of optical modulators arranged in an array, said plurality of optical modulators each including at least one nano-particle; and a control arrangement operatively coupled to said optical modulators, said control arrangement applying a stimulus to said nano-particles to thereby cause said nano-particles to change optical properties.

And wherein said control arrangement applies an electrical magnetic stimulus to said nano-particles.

However the prior art of record does not teach the method of claim 8, including fabricating a multi-component pattern comprising defining multiple regions of localized magnetic field maxima and minima on a substrate; and then applying magnetic nanoparticles to the substrate so that the magnetic nanoparticles aggregate on the first set of regions of localized magnetic field maxima and avoid regions of localized magnetic field minima.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (20040150865).

Chen, et al. (see especially claim 3) addresses claim 1, including a programmable mask comprising: a plurality of optical modulators arranged in an array, said plurality of optical modulators each including at least one nano-particle; and a control arrangement operatively coupled to said optical modulators, said control arrangement applying a stimulus to said nano-particles to thereby cause said nano-particles to change optical properties.

And wherein said control arrangement applies an electrical magnetic stimulus to said nano-particles.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (20040150865) in view of Raguse et al. (6,984,265).

Regarding claims 2-7 Chen et al. is included here as discussed above.

Chen et al. also teach that the nano-particles can be arranged in an array forming a plurality of discrete optical modulators. The stimulating may comprise applying a current, voltage or field to said nano-particles.

Therefore, Chen et al. teach applying some type of field to the magnetic nanoparticles.

The teachings of Chen et al. differ from those of the applicant in that the applicant teaches applying a magnetic field to produce localized magnetic field maxima and a substantially uniform magnetic field.

Raguse et al. disclose (see claims 24-30) a nanoparticle film comprising a three dimensional cross-linked array of nanoparticles and linker molecules in which the nanoparticle film is coherent, robust and self supporting.

And in claim 25, in which the nanoparticles are formed from material selected from the group consisting of metallic and magnetic materials.

Raguse et al. also teach that the nanoparticle is formed of a material such that it responds to an externally applied electric or magnetic field.

It would have been obvious to one having ordinary skill in the art to modify the teachings of Chen et al. and apply a field to the magnetic nanoparticle pattern as taught by Raguse et al. to adjust the pattern in order to make the claimed invention because it would have been obvious to one in the art to apply any field necessary to produce the desired arrangement of the magnetic nanoparticles pattern.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Stephen Rosasco whose telephone number is (571) 272-1389. The Examiner can normally be reached Monday-Friday, from 8:00 AM to 4:30 PM. The Examiner's supervisor, Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/S. Rosasco/  
Primary Examiner, Art Unit 1795

S.Rosasco  
05/11/10